WHAT IS CLAIMED IS:

1. A method of treating a CCR4-mediated condition or disease in a subject, said method comprising administering to a subject in need of such treatment an effective amount of a compound having the formula:

 Ar^1-X-Ar^2 (I)

wherein

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- Ar^1 and Ar^2 are each members independently selected from the group consisting of substituted or unsubstituted aryl, substituted or unsubstituted fused arylheterocyclic ring systems and substituted or unsubstituted heteroaryl; and X is a linking group selected from the group consisting of -N(R)-, -C(O)S-, $-CH=CHSO_2$ and $-SO_2N(R)$ wherein R is a member selected from the group consisting of H and substituted or unsubstituted (C_1-C_8) alkyl.
 - 2. A method in accordance with claim 1, wherein X is –NH-.
 - 3. A method in accordance with claim 1, wherein X is $-SO_2NH$ -.
- 4. A method in accordance with claim 1, wherein Ar¹ and Ar² are each substituted or unsubstituted members independently selected from the group consisting of:

- 5. A method in accordance with claim 2, wherein Ar¹ is substituted heteroaryl and Ar² is substituted or unsubstituted aryl.
- 1 6. A method in accordance with claim 5, wherein said Ar¹ is a 2 substituted heteroaryl selected from the group consisting of substituted thiazolyl, 3 substituted thienyl, and substituted furanyl.

1	1 7. A method in ac	cordance with claim 5, wherein said Ar ² is a		
2	2 substituted or unsubstituted phenyl or	a substituted or unsubstituted naphthyl.		
1	1 8. A method in ac	cordance with claim 3, wherein Ar ² is a phenyl		
2	2 group having from 1 to 4 substituents	independently selected from the group consisting of		
3	3 halogen, hydroxy, (C ₁ -C ₄)alkyl, (C ₁ -C	halogen, hydroxy, (C ₁ -C ₄)alkyl, (C ₁ -C ₄)alkoxy, (C ₁ -C ₄)alkylthio, (C ₁ -C ₄)haloalkyl, (C ₁ -		
4	C ₄)haloalkoxy, nitro, cyano, (C ₁ -C ₄)acyl, amino, (C ₁ -C ₄)alkylamino, and di(C ₁ -			
5	5 C ₄)alkylamino.			
1	1 9. A method in ac	cordance with claim 8, wherein said phenyl group		
2	has from 1 to 3 substituents independently selected from the group consisting of halogen,			
3	3 (C_1-C_4) haloalkyl, (C_1-C_4) haloalkoxy,	nitro, cyano, and (C_1-C_4) acyl.		
1	1 10. A method in ac	cordance with claim 3, wherein Ar ¹ is a substituted		
2	or unsubstituted monocyclic or bicyclic heterocycle.			
1	1 11. A method in ac	cordance with claim 10, wherein said heterocycle is		
2	2 selected from the group consisting of	pyrrolyl, pyrazolyl, imidazolyl, pyrazinyl, oxazolyl,		
3	isoxazolyl, thiazolyl, furyl, thienyl, pyridyl, pyrimidyl, benzothiazolyl, benzoxadiazolyl,			
4	4 purinyl, benzimidazolyl, indolyl, isoq	uinolyl, quinoxalinyl and quinolyl.		
1	1 12. A method in ac	cordance with claim 11, wherein said heterocycle is		
2	2 selected from the group consisting of	selected from the group consisting of thienyl, thiazolyl and benzoxadiazolyl.		
1	1 13. A method in ac	cordance with claim 1, wherein said CCR4-		
2	2 mediated condition or disease is select	ted from the group consisting of contact		
3	hypersensitivity, atopic dermatitis, allergic airway hypersensitivity, allergic rhinitis,			
4	atherosclerosis, septic shock, angina, myocardial infarction, restenosis,			
5	ischemia/reperfusion injury, multiple sclerosis, rheumatoid arthritis, type I diabetes,			
6	6 psoriasis, cancer and HIV infection.			
1	1 14. A method in ac	cordance with claim 1, wherein said CCR4-		
2	2 mediated condition or disease is psort	asis, contact hypersensitivity or atopic dermatitis.		

A method in accordance with claim 14, wherein said CCR4-

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mediated condition or disease is psoriasis.

1	16. A method in accordance with claim 14, wherein said CCR4-	
2	mediated condition or disease is contact hypersensitivity.	
1	17. A method in accordance with claim 14, wherein said CCR4-	
2	mediated condition or disease is atopic dermatitis.	
1	18. A method in accordance with claim 1, wherein said CCR4-	
2	mediated condition or disease is a disease of the airway.	
1	19. A method in accordance with claim 18, wherein said disease of the	
2	airway is selected from the group consisting of allergic asthma and allergic rhinitis.	
1	20. A method in accordance with claim 18, wherein said disease of the	
2	airway is allergic asthma.	
1	21. A method in accordance with claim 1, wherein said CCR4-	
2	mediated condition or disease is a disease of innate immunity.	
1	22. A method in accordance with claim 21, wherein said disease of	
2	innate immunity is septic shock.	
1	23. A method in accordance with claim 1, wherein said CCR4-	
2	mediated condition or disease is atherosclerosis.	
1	24. A method in accordance with claim 1, wherein said CCR4-	
2	mediated condition or disease is a disease or condition characterized by platelet	
3	aggregation or thrombosis.	
1	25. A method in accordance with claim 24, wherein said CCR4-	
2	mediated disease or condition is selected from the group consisting of angina, myocardial	
3	infarction, restenosis, stroke and ischemia/reperfusion injury.	
1	26. A method in accordance with claim 1, wherein said CCR4-	
2	mediated condition or disease is an allergic condition and said compound is used alone or	
3	in combination with at least one therapeutic agent wherein said therapeutic agent is an	
4	antihistamine.	

1	27. A method in accordance with claim 1, wherein said CCR4-	
2	mediated disease or condition is psoriasis and said compound is used alone or in	
3	combination with at least one therapeutic agent selected from a corticosteroid, a lubricant	
4	a keratolytic agent, a vitamin D ₃ derivative, PUVA, or anthralin.	
1,	28. A method in accordance with claim 1, wherein said CCR4-	
2	mediated disease or condition is atopic dermatitis and said compound is used alone or in	
3	combination with at least one therapeutic agent selected from a lubricant and	
4	corticosteroid.	
1	29. A method in accordance with claim 1, wherein said CCR4-	
2	mediated condition or disease is asthma and said compound is used alone or in	
3	combination with at least one therapeutic agent selected from a \(\beta 2-agonist \) and a	
4	corticosteroid.	
1	30. A method in accordance with claim 1, wherein said compound	
2	interferes with the interaction between CCR4 and a ligand.	
1	31. A method in accordance with claim 1, wherein said administration	
2	is oral or intravenous.	
1	32. A method in accordance with claim 1, wherein said subject is	
2	selected from the group consisting of human, rat, dog, cow, horse, and mouse.	
1	33. A method in accordance with claim 1, wherein said subject is	
2	human.	
1	34. A method in accordance with claim 1, wherein said compound is	
2	selected from the group consisting of	

- 35. A method in accordance with claim 1, wherein said CCR4-mediated disease or condition is selected from the group consisting of multiple sclerosis, rheumatoid arthritis, type I diabetes, psoriasis, cancer and HIV infection; Ar¹ is a substituted heterocycle; X is -SO₂NH-; and Ar² is a substituted phenyl.
 - **36**. A method in accordance with claim 1, wherein said CCR4-mediated disease or condition is selected from the group consisting of multiple sclerosis, rheumatoid arthritis, type I diabetes, psoriasis, cancer and HIV infection; Ar¹ is a substituted heterocycle; X is –NH-; and Ar² is naphthyl.
 - 37. A pharmaceutical composition for the treatment of a CCR4-mediated disease or condition, said composition comprising a pharmaceutically acceptable carrier and an effective amount of a compound which inhibits the binding of MDC or TARC to CCR4, said compound having the formula:

 $Ar^{1}-X-Ar^{2} \qquad (I)$

- Ar¹ and Ar² are each members independently selected from the group consisting of substituted or unsubstituted aryl, substituted or unsubstituted fused arylheterocyclic ring systems and substituted or unsubstituted heteroaryl; and X is a linking group selected from the group consisting of –N(R)-, -C(O)S-, -CH=CHSO₂- and –SO₂N(R)- wherein R is a member selected from the group consisting of H and substituted or unsubstituted (C₁-C₈)alkyl.
 - 38. A composition of claim 37, wherein X is –NH-.
 - 39. A composition of claim 37, wherein X is –SO₂NH-.

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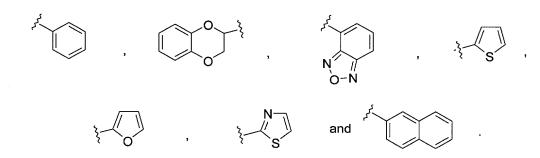
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1 40. A composition of claim 37, wherein Ar¹ and Ar² are each
2 substituted or unsubstituted members independently selected from the group consisting
3 of:



- 1 41. A composition of claim 37, wherein Ar¹ is substituted heteroaryl 2 and Ar² is substituted or unsubstituted aryl.
 - 42. A composition of claim 41, wherein said Ar¹ is a substituted heteroaryl selected from the group consisting of substituted thiazolyl, substituted thienyl, and substituted furanyl.
 - 43. A composition of claim 41, wherein said Ar² is a substituted or unsubstituted phenyl or a substituted or unsubstituted naphthyl.
- 1 44. A composition of claim 41, wherein Ar² is a phenyl group having 2 from 1 to 4 substituents independently selected from the group consisting of halogen,
- 3 hydroxy, (C_1-C_4) alkyl, (C_1-C_4) alkoxy, (C_1-C_4) alkylthio, (C_1-C_4) haloalkyl, (C_1-C_4)
- 4 C₄)haloalkoxy, nitro, cyano, (C₁-C₄)acyl, amino, (C₁-C₄)alkylamino, and di(C₁-
- 5 C₄)alkylamino.
- 1 45. A composition of claim 44, wherein said phenyl group has from 1
- 2 to 3 substituents independently selected from the group consisting of halogen, (C₁-
- 3 C_4)haloalkyl, (C_1-C_4) haloalkoxy, nitro, cyano, and (C_1-C_4) acyl.
- 1 46. A composition of claim 37, wherein Ar¹ is a substituted or unsubstituted monocyclic or bicyclic heterocycle.
- 1 47. A composition of claim 46, wherein said heterocycle is selected 2 from the group consisting of pyrrolyl, pyrazolyl, imidazolyl, pyrazinyl, oxazolyl,

- 3 isoxazolyl, thiazolyl, furyl, thienyl, pyridyl, pyrimidyl, benzothiazolyl, benzoxadiazolyl,
- 4 purinyl, benzimidazolyl, indolyl, isoquinolyl, quinoxalinyl and quinolyl.
- 1 48. A composition of claim 47, wherein said heterocycle is selected
- 2 from the group consisting of thienyl, thiazolyl and benzoxadiazolyl.
- 1 49. A composition of claim 37, wherein said compound is selected
- 2 from the group consisting of

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- **50**. A method for modulating CCR4 function in a cell, comprising contacting said cell with a CCR4-modulating amount of a composition of claim **37**.
- 1 51. A method for modulating CCR4 function, in which said cell is 2 contacted with a CCR4 protein with a therapeutically effective amount of the composition 3 of claim 37.
 - 52. A compound of formula (I):

$$\begin{array}{c} Z \\ X \\ X \\ I \end{array}$$

- 4 or a pharmaceutically acceptable salt thereof, wherein
- W is selected from aryl, heteroaryl, (C₁-C₈)alkyl, heteroalkyl, cycloalkyl and
- 6 heterocycloalkyl;
- 7 X is selected from $N(R^5)$, S, O, $C(R^3)=C(R^4)$, $N=C(R^4)$ and, optionally, when Z is
- 8 N, X can be $C(R^6)(R^7)$;

9	Y is selected from a bond, N(R ⁵), N(R ⁵)-(C ₁ -C ₈)alkylene, O, S and S(O) _n , wherein
10	the integer n is 1 or 2;
11	Z is selected from N and C(R ⁸);
12	R ¹ and R ² are independently selected from H, halogen, CN, CO ₂ R', CONR'R",
13	(C_1-C_8) alkyl, heteroalkyl, aryl, heteroaryl, $N(R^6)(R^7)$, OR^9 and optionally,
14	R ¹ and R ² combine to form a 5- to 8-membered ring containing from 0 to 3
15	heteroatoms selected from N, O and S, wherein R' and R" are
16	independently selected from H, (C1-C8)alkyl and aryl, and when R' and R"
17	are attached to nitrogen atom, they may be combined with the nitrogen
18	atom to form a 5-, 6-, or 7-membered ring;
19	R ³ , R ⁴ and R ⁸ are independently selected from H, halogen, CN, OH, (C ₁ -C ₈)alkyl,
20	heteroalkyl, aryl, heteroaryl, O(C ₁ -C ₈)alkyl, N(R ⁶)(R ⁷) and OR ⁹ ;
21	R ⁵ is selected from H, (C ₁ -C ₈)alkyl, heteroalkyl, aryl and heteroaryl;
22	R ⁶ and R ⁷ are independently selected from H, (C ₁ -C ₈)alkyl, heteroalkyl, aryl and
21 22 23 23 24 7 25	heteroaryl; and
24	R ⁹ is selected from (C ₁ -C ₈)alkyl, heteroalkyl and haloalkyl;
25	with the provisos that R^2 is other than H when W is unsubstituted phenyl, X is S,
26	Y is NH, Z is N and R^1 is (C_1-C_8) alkyl; and R^1 is other than phenyl, when W is phenyl or
27	unsubstituted naphthyl, X is S, Y is NH, and Z is N.
26 27	53. A compound of claim 52, wherein Z is N.
्रे ^क 1	54. A compound of claim 52, wherein X is S.
1	55. A compound of claim 52, wherein Y is N(R ⁵).
1	56. A compound of claim 52, wherein Z is N, X is S and Y is $N(R^5)$.
1	57. A compound of claim 52, wherein W is aryl or heteroaryl.
1	58. A compound of claim 57, wherein W is substituted or unsubstituted

phenyl or naphthyl.

pyridyl or quinolyl.

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A compound of claim 57, wherein W is substituted or unsubstituted

1	60.	A compound of claim 52, wherein R ¹ and R ² are each
2	independently selected	ed from H and (C_1-C_8) alkyl.
.1	61.	A compound of claim 52, wherein R ¹ and R ² are combined to form
2	a fused 6-membered aryl or heteroaryl ring.	
1	62 .	A compound of claim 52, wherein Z is N, X is S, Y is N(R ⁵) and
2	R ¹ and R ² are each in	dependently selected from H and (C ₁ -C ₈)alkyl.
1	63.	A compound of claim 52, wherein Z is N, X is S, Y is N(R ⁵) and
2	R ¹ and R ² are combined to form a fused 6-membered aryl or heteroaryl ring.	
1	64.	A compound of claim 52, said compound being selected from the
2	group consisting of:	

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1 65. A compound of claim 52, said compound being selected from the

2 group consisting of:

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66. A compound of claim 52, wherein

W is selected from substituted phenyl, substituted or unsubstituted naphthyl, pyridyl, quinolyl, (C₁-C₈)alkyl, heteroalkyl, cycloalkyl and heterocycloalkyl;

X is selected from $N(R^5)$, S, O, $C(R^3)=C(R^4)$, $N=C(R^4)$ and, optionally, when Z is N, X can be $C(R^6)(R^7)$;

Y is selected from a bond, N(R⁵), N(R⁵)-(C₁-C₈)alkylene, O, S and S(O)_n, wherein the integer n is 1 or 2;

Z is selected from N and $C(R^8)$;

 R^1 and R^2 are independently selected from H, halogen, CN, CO_2R ', CONR'R'', (C_1-C_8) alkyl, heteroalkyl, aryl, heteroaryl, $N(R^6)(R^7)$, OR^9 and optionally, R^1 and R^2 combine to form a 5- to 8-membered ring containing from 0 to 3 heteroatoms selected from N, O and S, wherein R' and R" are independently selected from H, (C_1-C_8) alkyl and aryl, and when R' and R" are attached to a nitrogen atom, they may be combined with the nitrogen atom to form a 5-, 6-, or 7-membered ring;

 R^3 , R^4 and R^8 are independently selected from H, halogen, CN, OH, (C_1-C_8) alkyl, heteroalkyl, aryl, heteroaryl, $O(C_1-C_8)$ alkyl, $N(R^6)(R^7)$ and OR^9 ;

R⁵ is selected from H, (C₁-C₈)alkyl, heteroalkyl, aryl and heteroaryl;

 R^6 and R^7 are independently selected from H, (C1-C8)alkyl, heteroalkyl, aryl and heteroaryl; and

R⁹ is selected from (C₁-C₈)alkyl, heteroalkyl and haloalkyl.

67. A compound of claim 66, wherein Z is N.

1	68. A compound of claim 66, wherein X is S.	
1	69. A compound of claim 66, wherein Y is N(R ⁵).	
1	70. A compound of claim 66, wherein Z is N, X is S and Y is N(R ⁵).	
1	71. A compound of claim 66, wherein W is substituted phenyl or	
2	substituted or unsubstituted naphthyl.	
1	72. A compound of claim 66, wherein W is substituted or unsubstituted	
2	pyridyl or substituted or unsubstituted quinolyl.	
1	73. A compound of claim 66, wherein R ¹ and R ² are independently	
2	selected from the group consisting of H and (C ₁ -C ₈)alkyl.	
1	74. A compound of claim 66, wherein R ¹ and R ² are combined to form	
2	a fused 6-membered aryl or heteroaryl ring.	
1	75. A compound of claim 66, wherein W is substituted phenyl or	
2	substituted or unsubstituted naphthyl, Z is N, X is S, Y is N(R ⁵), and R ¹ and R ² are	
3	independently selected from the group consisting of H and (C ₁ -C ₈)alkyl.	
1	76. A compound of claim 66, wherein W is substituted phenyl or	
2	substituted or unsubstituted naphthyl, Z is N, X is S, Y is N(R ⁵), and R ¹ and R ² are	
3	combined to form a fused 6-membered aryl or heteroaryl ring.	
1	77. A compound of claim 66, wherein W is substituted or unsubstituted	
2	pyridyl or substituted or unsubstituted quinolyl, Z is N, X is S, Y is $N(R^5)$, and R^1 and R^2	
3	are independently selected from the group consisting of H and (C ₁ -C ₈)alkyl.	
1	78. A compound of claim 66, wherein W is substituted or unsubstituted	
2	pyridyl or substituted or unsubstituted quinolyl, Z is N, X is S, Y is $N(R^5)$, and R^1 and R^2	
3	are combined to form a fused 6-membered aryl or heteroaryl ring.	
1	79. A pharmaceutical composition comprising a pharmaceutically	
2	acceptable carrier and a compound of formula (I):	
3	$Z \xrightarrow{R^1} R^2$	
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or a pharmaceutically acceptable salt thereof, wherein 5 W is selected from aryl, heteroaryl, (C₁-C₈)alkyl, heteroalkyl, cycloalkyl and 6 heterocycloalkyl; 7 X is selected from $N(R^5)$, S, O, $C(R^3)=C(R^4)$, $N=C(R^4)$ and, optionally, when Z is 8 N, X can be $C(R^6)(R^7)$; 9 Y is selected from a bond, N(R⁵), N(R⁵)-(C₁-C₈)alkylene, O, S and S(O)_n, wherein 10 11 the integer n is 1 or 2; 12 Z is selected from N and $C(R^8)$; R¹ and R² are independently selected from H, halogen, CN, CO₂R', CONR'R", 13 (C_1-C_8) alkyl, heteroalkyl, aryl, heteroaryl, $N(R^6)(R^7)$, OR^9 and optionally, 14 R¹ and R² combine to form a 5- to 8-membered ring containing from 0 to 3 15 heteroatoms selected from N, O and S, wherein R' and R" are 16 independently selected from H, (C1-C8)alkyl and aryl, and when R' and R" 17 are attached to nitrogen atom, they may be combined with the nitrogen 18 atom to form a 5-, 6-, or 7-membered ring; 19 R³, R⁴ and R⁸ are independently selected from H, halogen, CN, OH, (C₁-C₈)alkyl, 20 heteroalkyl, aryl, heteroaryl, O(C₁-C₈)alkyl, N(R⁶)(R⁷) and OR⁹; 21 R⁵ is selected from H, (C₁-C₈)alkyl, heteroalkyl, aryl and heteroaryl; 22 R⁶ and R⁷ are independently selected from H, (C₁-C₈)alkyl, heteroalkyl, aryl and 23 heteroaryl; and 24 R⁹ is selected from (C₁-C₈)alkyl, heteroalkyl and haloalkyl. 25 1 **80**. A method for treating a CCR4-mediated condition in a subject, said method comprising administering to a subject in need of such treatment an effective 2 3 amount of a compound of of formula (I): V-Y X R^2 4 5 6 or a pharmaceutically acceptable salt thereof, wherein W is selected from aryl, heteroaryl, (C₁-C₈)alkyl, heteroalkyl, cycloalkyl and 7

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X is selected from N(R⁵), S, O, C(R³)=C(R⁴), N=C(R⁴) and, optionally, when Z is

heterocycloalkyl;

N, X can be $C(R^6)(R^7)$;

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Y is selected from a bond, N(R⁵), N(R⁵)-(C₁-C₈)alkylene, O, S and S(O)_n, wherein 11 the integer n is 1 or 2; 12 Z is selected from N and $C(R^8)$; 13 R¹ and R² are independently selected from H, halogen, CN, CO₂R', CONR'R", 14 (C₁-C₈)alkyl, heteroalkyl, aryl, heteroaryl, N(R⁶)(R⁷), OR⁹ and optionally, 15 . R¹ and R² combine to form a 5- to 8-membered ring containing from 0 to 3 16 heteroatoms selected from N, O and S, wherein R' and R" are 17 independently selected from H, (C₁-C₈)alkyl and aryl, and when R' and R" 18 are attached to nitrogen atom, they may be combined with the nitrogen 19 atom to form a 5-, 6-, or 7-membered ring; 20 R³, R⁴ and R⁸ are independently selected from H, halogen, CN, OH, (C₁-C₈)alkyl, 21 heteroalkyl, aryl, heteroaryl, $O(C_1-C_8)$ alkyl, $N(R^6)(R^7)$ and OR^9 ; 22 R⁵ is selected from H, (C₁-C₈)alkyl, heteroalkyl, aryl and heteroaryl; 23 R⁶ and R⁷ are independently selected from H, (C₁-C₈)alkyl, heteroalkyl, aryl and 24 25 heteroaryl; and R⁹ is selected from (C₁-C₈)alkyl, heteroalkyl and haloalkyl. 26

81. A pharmaceutical composition comprising a pharmaceutically acceptable carrier and a compound selected from the group consisting of:

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82. A pharmaceutical composition of claim 81, wherein said

2 compound is selected from the group consisting of:

1 83. A method for treating a CCR4-mediated condition in a subject, said

method comprising administering to a subject in need of such treatment an effective

amount of a compound selected from the group consisting of:

1 84. A method in accordance with claim 83, wherein said compound is

2 selected from the group consisting of: